America's Littlewood crisis: The sentimental threat to animal research

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In today's rapidly changing scene, most of us in the medical profession have been so preoccupied with the sweeping changes in social aspects of practice, and the problems raised about proper training (particularly of surgical residents), that we have perhaps given insufficient thought or attention to other problems of greater long-term import. Having spent a year of study in a country with over a century of experience in socialized medicine, and having studied the operation of the Swedish system in some detail,[5] I can assure you that, in spite of some weaknesses which our Swedish colleagues would be the first to point out, the over-all operation is such as to have left me with more emotional leisure for the study of the definite serious threat posed by the antivivisectionists.

That this is a pressing, continuing and serious threat should need no great emphasis to this audience. That there are specific steps we are peculiarly qualified to take, I hope to make clear.

BRITISH BACKGROUND OF ANTIVIVISECTIONISM

The origins of the antivivisectionist movement in Great Britain are of concern to us in the United States, because it is there that the legislation most crippling to medical research first arose. Some attention to the background could perhaps be of help to us in our present crisis.

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The antivivisectionist movement began with Frances Power Cobbe, a reform-minded Irish zealot from Bristol, who stumbled upon physiological experiments in progress during her visit to Florence, Italy, in 1863.[19]

That there may have been basis for her complaint is suggested by the fact that the matter was made a part of the business of the meeting of the British Association for the Advancement of Science in 1870. A Committee of this Association was appointed to consider the subject of physiological experimentation, and the following year it recommended that anesthesia be used whenever possible (especially in class demonstrations), and that research be performed only by well-schooled investigators, and in proper surroundings.[2, 19]

That these recommendations were not too literally followed is implied by the 1873 publication of a *Handbook of the Physiological Laboratory*,[4] co-authored by J. Burdon-Sanderson, one of the co-signers of the Committee's recommendations, and Professor of Human Physiology at University College, London.[4] This book appeared to the antivivisectionists to abound in descriptions of experimental operative procedures, unfortunately without mentioning anesthesia. The antivivisectionists were particularly incensed that much of the work of François Magendie, Claude Bernard, and Paul Bert was done before the advent of anesthesia,[9] and that the general adoption of anesthesia for such purposes apparently did not come for some years thereafter. Many experiments,

notably those of Bernard* and Bert, were performed with only curare.[3, 19]

The history of the antivivisectionist movement has been compiled by Westacott, who lists famous names among Miss Cobbe's supporters, including Carlyle, Tennyson, Elizabeth Barrett Browning, and "78 medical men." Miss Cobbe was joined by Dr. George Hoggan, who, before becoming an antivivisectionist, had worked for several months with Claude Bernard.[19] Together they decided that the Royal Society for the Prevention of Cruelty to Animals was unlikely to promote a bill against vivisection, and therefore had their own bill introduced into the House of Lords on May 4, 1875. An opposing bill, thought to have been the work of Burdon-Sanderson and Charles Darwin, was introduced into the Commons a few days later.[2, 19]

As a result of the introduction of these two bills, the Government appointed a "Royal Commission on the Practice of Subjecting Live Animals to Experiments for Scientific Purposes," which questioned some 50 witnesses, and the deliberations of which culminated in the passage of the Cruelty to Animals Act of 1876.[2, 11, 19]

There had been earlier laws against cruelty to animals, but none that were very effective against unnecessary infliction of pain during medical experimentation. In 1822, the first Animal Protection Act had been passed, after promotion by Richard Martin, who helped to found the Royal Society for the Prevention of Cruelty to Animals two years later.[19] This act served to prevent cruelty and the improper treatment of horses and cattle. In 1835, the Martin Act had been extended to provide protection to dogs and other domestic animals. In 1849, all previous acts had been repealed and reenacted.[19]

The hearings of the Royal Commission were published and contain testimony concerning methods of investigation.[2] Primary antivivisectionist furor concerned research on the Continent, and the fear that it might spread to Britain. Only a modicum of basis for concern was found in England. An example of this is the following testimony of one Dr. Emmanuel Klein, Lecturer on Histology at the Medical School of St. Bartholomew's Hospital, and co-author of the *Handbook of the Physiological Laboratory.*[4]

> Klein: "Except for teaching purposes, for demonstration, I never use anaesthetics, where it is not necessary for convenience. . . ."
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> Chairman: "When you say that you only use them for convenience's sake, do you mean that you have no regard at all to the sufferings of the animals?"
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> Klein: "No regard at all."*

Wherever possible, most scientists who testified had renounced experiments without the newly discovered anesthetics. Among these were Charles Darwin, Sir James Paget, and Joseph Lister.[2] On the other hand, as Lord Lister made clear in a letter to W. W. Keen (April 4, 1898) on the occasion of a struggle to defeat national legislation to prohibit animal experimentation in the United States, the forces behind passage of the bill in 1876 were unenlightened, and hugely political.† According to Lister, no single instance of animal abuse in this connection had been uncovered in the evidence presented to the Commission. In his letter he writes, "Yet in obedience to popular outcry, the Government of the day passed an Act which went much further than the recommendations of the Commissioners."[6]

Queen Victoria was grateful to Lord Lister for professional services he had previously rendered to her, but not even his pleading could dissuade her from a headstrong pressure for passage.[6] Prime Min-

*Bernard described beautifully the locus of action of curare, and stressed the retention of consciousness. In their furor over this point, the antivivisectionists overlook Bernard's suggestion of artificial respiration for man by tracheostomy and respirator, as had reportedly been accomplished for animals in 1815 by Watterton and Brodie.[3]

*Westacott slyly omits the statement that Klein used anesthetics for dogs and cats, and was now speaking of frogs.

†For a fascinating and instructive account of the resounding success of William Henry Welch in defeating the American antivivisectionists in the closing years of the nineteenth century see *William Henry Welch and the Heroic Age of American Medicine* by Simon Flexner, and James Thomas Flexner, New York, 1941, The Viking Press, 254.

ister Disraeli thought little of the bill, or of the chances that it might become law, "but the Queen insisted."[15]

QUEEN VICTORIA AS AN ANTIVIVISECTIONIST

It is valuable to us today to explore the background that led Queen Victoria to become a champion of antivivisectionism. She was the offspring of the Duke of Kent, one of a family of weak and extravagant children of George the Third. Her father, in returning with his German wife to England in preparation for Victoria's birth, had made himself so destitute that he was forced to drive his own shabby carriage himself. He died a few months later. Not till 1830, when she was 11, did Parliament provide support for Victoria's education. She was raised in Kensington Palace, surrounded by schemers who sought to exploit her position for their own ends. The worst and most tenacious of these, Sir John Conroy (much later exposed as a superb embezzler), was the executor of her father's "estate," which consisted primarily of debts. There was interminable squabbling between her mother's household and others of the royal family, and as a child she was manipulated by rival factions like one of her own puppets.[12] Even when ill with typhoid fever at the age of 15, she was not spared overbearing efforts at coercion by Conroy (in some of which her mother joined), so that a headstrong child came to reject and mistrust all about her.

With all about her showing greed and chicanery, and having outgrown her famous collection of dolls, Victoria turned to pets, the only living things she felt she could trust.[12] Her diary suggests that one of her chief pleasures on moving to Buckingham Palace at the age of 18, shortly after the death of William IV, was that "dear Dashy," her King Charles spaniel, was "quite happy in the garden."[12] A year later, on returning to the palace from her coronation, her first royal activity was to run up to her room to give her dog a bath. Her preoccupation with animals was such that it is mentioned repeatedly in Longford's biography, one time as squeamishness about anatomical descriptions,[12] another as clothing her dog in pants and vest, and another as objecting to the shooting of old horses.[12] Remission of criminal sentences in honor of the Jubilee Year had to be signed by Victoria. She remitted all but one, and that was for cruelty to animals.[12] In spite of this objection to the use of animals for investigation, she, like so many antivivisectionists, was quick to take personal advantage of the medical knowledge so gained. She was the first member of the royal family to be vaccinated against smallpox. She was also the first of the royal family to profit by anesthesia, which she did at the time of the birth of her last child.[12] That there was much confusion in her thinking on this subject is also suggested by the fact that, although she was still prodding Gladstone about what she called this "dreadful subject"[12] 5 years after passage of the Act of 1876, she, nevertheless, had had no personal objection to hunting pheasants with her family.[12]

The British record on animal research legislation offers lessons which should be helpful to us today.

THE LITTLEWOOD REPORT AND THE STATUS OF BRITISH ANIMAL RESEARCH

The number of experiments performed under the Act of 1876 rose so steeply as to lead to the appointment of the "Second Royal Commission" in 1906, and to the appointment of "The Departmental Committee on Experiments on Animals" in 1963. Other committees had studied the problem, and further acts had been passed to supplement the 1876 Act. The report of this last committee, which was published in April, 1965, is known as the Littlewood Report,[11] after the name of the Committee's chairman. It has been extensively used in the United States, both as a source of arguments favoring regulation of experimentation, and as a source of ideas for proposed paralyzing legislation.

As the British Acts stood when the Committee's study was initiated in 1963, and

as they essentially remain, no stray dog seized by the police could be given or sold "for the purposes of vivisection."[11] All experimenters were required to be licensed by the Home Office, or to work under the surveillance of one who was so licensed. Licensure, given by the Secretary of State for the Home Office, required application on a form describing the locus of the proposed experiments, the nature of the experiments, and how they could be expected to give new knowledge. The application had to be signed by the president of one of 12 listed learned societies, and by a professor of physiology, medicine, anatomy, medical jurisprudence, materia medica, or surgery from a university or college in Great Britain or Northern Ireland.

After the candidate had gained licensure, the law then permitted him to work only within a limited pattern. He could not perform experiments for gaining technical skill or for public viewing. The Acts also required that all laboratories be licensed, that all experiments be reported to the Secretary of State, and that all laboratories be under the scrutiny of government inspectors. The Acts forbade the making of any motion pictures of any surgical procedure on any animal, except with prior consent in writing of the Secretary of State. The use of curare and curare-form drugs without specific permission of the Secretary of State was specifically forbidden, and even when permission had been secured, 48 hours' notice to the inspector was required before each experiment or series of similar experiments.

Six additional restrictions could be removed only by special certificates. These restrictions included: *A,* prohibition of experiments without anesthesia, including "feeding experiments" and "inoculations"; *B,* prohibition of recovery from anesthesia after surgical experiments, but rather, immediate destruction; *C,* prohibition of lecture demonstrations under anesthesia; *D,* prohibition of confirmation of previously performed experiments, whether previously performed by the applicant or others; *E* and *EE,* prohibition of use of dogs or cats for "feeding" or "inoculation" experiments without anesthesia, or for experiments involving recovery after surgical operations; and *F,* prohibition of use of the horse, ass, or mule.[11]

In practice, applications to set aside these prohibitions may well take over a month before certificates are secured, and these certificates usually limit either the number of experiments permitted, or the period of grace in which they may be done. The contemplation with which these applications are to be reviewed is expressed in Condition 2 of the license: "No experiment under any Certificate held by the Licensee may be performed until he/she has been notified that the Certificate has not been disallowed by the Secretary of State."

The inspectors are men with medical or veterinary qualifications, but no mention is made of the necessity of their having investigative backgrounds or understanding. They may pass judgment on the permissibility of all except acute experiments under anesthesia, and may terminate any experiment in progress. Recommendation No. 62 of the Committee is, "We recommend that there should be no limitation on the inspector's authority to question the purpose and design of any project." Immediately following is Recommendation No. 63, which is as follows: "There should be no distinction between inspectors according to the nature of their scientific qualifications." The research work of outstanding scientists is thus potentially destroyed at the hands of the uninitiated.

An extremely valuable activity in many American medical school programs is a dog surgery course patterned after those at Johns Hopkins and Harvard,[10] in which stress is laid upon, first, retention of good health for the subject, and, second, meticulous provision for proper aftercare. Such a course is illegal in England.

What has been the reaction of the British researcher? Lord Lister, in his letter to W. W. Keen, wrote, "Our law on this subject should never have been passed and ought to be repealed."[6] I spoke with another British

surgeon, Mr. I. C. Cree, who recently left England (primarily because of legislative problems connected with adequate certification for research purposes) to join the faculty of a Canadian medical school. He had found that in England his survival experiments required his license and 4 certificates, and that he was required to travel 2 hours each way from his clinical post to reach a registered laboratory in which to work. Another who left for similar reasons is now the director of a primate research center in the United States.

The vast majority of advances in surgery since 1876 have come from the United States and other free countries, not from England. These include open-heart surgery, surgery of the arterial system in major measure, development of pacemakers, methods of closed intestinal anastomosis, studies leading to the understanding of the fundamental problems of intestinal obstruction, replacement of hopelessly damaged heart valves, kidney transplants, and many others. This must not be construed as to denigrate British scientists, but rather to stress that the restraints imposed upon them have blocked their progress in humane endeavors, for they have excelled in other directions, such as in the development of penicillin, or as in the development of the Brock procedure, in which the need for large animals was less specific.

While the Acts of 1876 and succeeding years have not been the sole factor in this paucity of production (the dearth of research financing also being a component), nevertheless the atmosphere in which to work and troubles with frustration and delay in getting licensure and certifications have played a substantial and tragic role.

One well-known British surgeon, who himself, like many others, spent a year at one of our midwestern universities in order to do research in freedom from sentimental restrictions, expressed himself as feeling that it would be as great a disaster for Great Britain, as for America, if laws were to be passed here that were in any way similar to the Act of 1876. The alert British surgeon, in particular, heavily depends on the progress attained through American experimental work, especially that of a basic nature, which he cannot get done at home. In addition, he finds it disturbing that the lack of such open and free inquiry as is associated with freedom to challenge, by performance of basic experiments, has led to an attitude among many leading British surgeons of authoritarianism—not an attitude that fosters progress, but a shield behind which to conceal the weakness incident to absence of opportunities for ready biomedical investigation.[20]

BACKGROUND OF EFFORTS TO DESTROY MEDICAL PROGRESS IN THE U.S.A.

In 1863, Henry Bergh resigned as Secretary of the American Legation in St. Petersburg, Russia, to become what the newspapers called *The Great Meddler*. He rallied the support of New York's Mayor John T. Hoffman, Peter Cooper, Horace Greeley, John Jacob Astor, Jr., Hamilton Fish, and James J. Roosevelt, and obtained a charter on April 10, 1866, for the American Society for the Prevention of Cruelty to Animals. Just 9 days later, the New York Legislature passed America's first anticruelty law, which gave the ASPCA powers to enforce the prohibition against cruelty. By the beginning of the new century, the Society in New York had been given the responsibility for the care of stray animals.[1] This situation still prevails, and the State's excellent Metcalf-Hatch Act provides for a supply of pound animals to the experimental laboratories in and near New York City. Most of the State's research laboratories have made not only state inspectors, but also ASPCA inspectors welcome for on-site visits.

The field has been marred by the formation of many antivivisectionist societies which lack the wisdom and astuteness of the New York Section of the ASPCA, and seek openly to restrain or prohibit all research in which animals are utilized. These include the American Humane Association (1877), the American Antivivisection Society (1883),

the New England Antivivisection Society (1886), the American Humane Educational Society (1889), the New York Antivivisection Society (1910), the Humane Society of the United States (1954), and such recent arrivals as the National Catholic Society for Animal Welfare (not officially tied to or approved by the Catholic Church, and specifically *disapproved* by the Deans of the Catholic medical schools), the Animal Rescue League, the Animal Welfare Institute, and others.

There is little doubt about the determination of these latter organizations to stifle animal experimentation. In commenting on the Presidential address of C. W. Mayo before the Western Surgical Association in 1963,[13] the President of the American Antivivisection Society, O. B. Hunt, stated, "Dr. Mayo moves on to accuse the antivivisectionists of plotting to destroy the medical profession by introducing and supporting Regulation and Restriction Bills.

"Later in his address, he claims to read the A-V regularly. If this were true . . . he would have no trouble in learning that the antivivisectionists strongly oppose the Regulation Bills. *We had filed as our principal argument that the American public is yet not fully informed in sufficient numbers to support the enforcement of the Total Abolition of Vivisection.*"[8] (Italics by the present author.)

An even more rabid spokesman, and a very formidable opponent is Cleveland Amory, author of *The Proper Bostonian* and other widely read books. In recent testimony in Washington, he launched a "vituperative attack on the medical and scientific community, the White House, the Federal Government, HEW, the Surgeon General's Office, the Department of the Army, NASA, the VA, the Budget Bureau, and all conservationists."[16] Amory went on, "May I say in conclusion that I regard your pet-stealing as only a first step, that it should not, and must not, take the place of what must follow—a bill to get at the real roots, at the true source, of all of the animals' misery—the laboratory itself."[7]

The rabid nature of our opposition is well expressed by Hunt: "George Bernard Shaw once said, 'He who would not hesitate to vivisect an animal wouldn't hesitate to lie about it.' "[8]

An understanding of the antivivisectionists' motivations is helpful to us. Warbasse described them in 1910 as follows: "The neurologists have studied and described a disease condition, which has been designated by the name, zoophilic psychosis, in which there is an inordinate and exaggerated sympathy for the lower animals often associated with delusions that they are persecuted by man. It has not exactly the qualities of an insanity, but it is distinctly a psychasthenia or obsessive psychosis. Curiously these cases display a sympathy for suffering in animals while they show decidedly less concern for human suffering. . . . Morel reports the case of a patient who would faint at the sight of a sick animal but who did not fail to rent his windows on the days of executions, and allow his servants to go and witness the executions. The cases observed in America have been in persons who were found in the ranks of 'antivivisectionists' and kindred cults. Dana described them as cases of fine feelings gone wrong. . . . Besides these mentally diseased types and the mentally oblique, there is a large class of good-natured persons who are influenced by the earnestness of the others and whose opposition to animal experimentation is made possible because of their ignorance of its meaning."[17] Such classification is helpful in guiding us today to those who are educable, be they legislators or private citizens.

The motivation of the antivivisectionists today has been the subject of much consultation. Genuine concern seems less a factor than an insensate urge for luxury and public attention. The "Vivisection Investigation League . . . Antivivisection Society of New York" has at least twice placed a scurrilous advertisement in the *New York Times,* in April and on May 7, 1966. Inquiry of the *Times* reveals these to have cost approximately $1,875 each. The advertiser's address is given as 220 East 57th Street, an

extravagantly luxurious apartment as seen from the outside, there being no one in at the time of the call. The demand for public attention on the part of other groups also is apparent from loud and lurid claims, not one iota of which could be verified on the witness stand by representatives of the National Catholic Society for Animal Welfare when called upon to do so during hearings of the Senate Commerce Committee on March 28, 1966.

LEGISLATIVE ACTIVITY IN THE UNITED STATES

Until recently, the objective of the scientists and the National Society for Medical Research (NSMR) had been to fight attempts to impose federal restrictions on either acquisition or utilization of experimental animals. An example was the fight of 1898 in which W. W. Keen participated, another was that of 1962 in which the Griffiths and Moulder Bills occasioned hearings before the Commerce Committee, which decided to take action on neither.

Since 1963, there has developed a sharp increase in antivivisectionist legislative pressures, spurred in part by knowledge of the Littlewood Committee. In that year, under the guidance of many leaders of the National Society for Medical Research, the decision was made to prepare proper legislation, as the strongest countermeasure to the efforts of the antivivisectionists. The result was a well-drawn bill, dubbed The Animal Care Bill of 1964, which spelled out the responsibilities of federal departments and agencies in relation to animal research and training, and the dissemination of information on laboratory animal health, care, and use. All this was to be facilitated by advice from the Committee on Laboratory Animal Care, to be appointed by the President of the National Academy of Sciences. The emphasis throughout was on complete freedom for the investigator. The Council of the NSMR left the timing of the introduction of this bill to the Board of that Society.

In the meantime Congressman Roybal of California had prepared a bill very similar to that of the NSMR. Following approval of the Animal Care Bill of 1964 by the Council of NSMR, Mr. Roybal included essentially identical provisions in his bill, and introduced it as HR 5,191 in February, 1965, a move which was stimulated by the rising tide of proposed obstructionist legislation.

In the spring of 1965, the NSMR recognized the increasingly dynamic role which Dr. Maurice B. Visscher, Professor of Physiology at the University of Minnesota, had been playing in the legislative and other affairs of the Society by electing him President, a move which has proved immensely valuable to the maintenance of biological scientific freedom in the United States.

During the summer of 1965, the obstructionists embarked on *efforts to block acquisition of animals,* their leading bill being that of Congressman Joseph Y. Resnick of New York (HR 9,743), requiring licensure, the setting of standards of humane care, the marking of dogs and cats, and the keeping of records; all these on the part of both dealers and laboratories. Public auction of animals, or sale of dogs by weight would be forbidden. Violations were to be punishable by imprisonment for not more than a year, or fines of not more than $10,000.

Eleven other similar bills were included with the hearings on the Resnick Bill before the Subcommittee on Livestock and Feed Grains of the House Committee on Agriculture, September 2, 1965. Only seven days' notice concerning these hearings was obtained, and that, accidentally. Only 11 of 43 witnesses, and 8 of the 13 who put correspondence in the record were representatives of progress. Nonetheless, the hearings appear to have demonstrated the gross defects of the Resnick Bill and its 11 counterparts.

During September, the changing tempo and the shortness of notice on hearings led to the decision to remove the offices of NSMR from Rochester, Minn., where they had been during the fruitful years of the Presidency of Dr. Hiram E. Essex, to Washington, where Visscher, now spending nearly all of his time on this critical problem, could

make the Society more effective in meeting the mounting crisis. (The actual move was accomplished in March, 1966.)

Hearings were scheduled, with but six days' notice, for September 30 and October 1, 1965, on a series of bills concerned with *control or support of the laboratories,* several of which were patterned after the British Act of 1876. These hearings were held by the Subcommittee on Public Health and Welfare of the House Committee on Interstate and Foreign Commerce, chaired by Mr. O'Brien of New York. Three of the seven subcommittee members had introduced identical bills (Rogers of Florida [10,049], O'Brien of New York [10,589], and Springer of Illinois [10,213]), which, among other items, proposed the appointment of a single Coordinator of unspecified qualifications, with the responsibility and power to review, judge, and disapprove the patterns of all experiments, and to determine the numbers of experiments to be permitted, together with inspectors who could be representatives of antivivisectionist groups. Hearings began at 10 A.M. and ran until 5:30 P.M. Congressman Roybal spoke for his favorable HR 5,191, and was backed by Dr. James Shannon of the Department of Health, Education, and Welfare, who requested that the Committee defer action until the anticipated HEW bill could be prepared and introduced. With these exceptions, the antivivisectionists were given the day until nearly 5 P.M., when Visscher and Dr. Howard Schneider of the Animal Care Panel were allowed some time to present our case. Visscher was questioned at length, and it was clear that Mr. Rogers, in particular, had no grasp whatsoever of the importance to the public welfare of an unhampered approach for the experimenter.

The NSMR witnesses, 36 in number and from as far away as California, expected to testify the following day. They arrived to find their half of the hearings cancelled without notice. Such was the climate.

On March 7 and 8, 1966, further hearings were held before the Subcommittee on Livestock and Feed Grains of the House Committee on Agriculture, with Congressman Poage of Texas presiding. The matter under consideration consisted of 31 bills dealing with so-called *pet-napping.* The primary bill was that of Mr. Poage, HR 12,488, which implied that a substantial portion of dogs in research laboratories were stolen pets. The bill required the licensing of dealers and laboratories, that all animals be marked and have records kept in perpetuity, and that the defalcation of any single worker of a laboratory or dealer should be construed the defalcation of the establishment, with the resultant closing of that establishment pending hearings—truly a highly effective way to emasculate any research institution. Thirty-one representatives of the scientific community testified with telling effectiveness. A committee to make recommendations on specific changes in the Poage and similar bills had been suggested by the New York State Society for Medical Research in January, 1966. Headed by W. S. Riker, Jr., M.D., its recommendations had been accepted by the NSMR, and were presented by Visscher as President of the Society.

Through the good preparation of the NSMR, Congressman Nelsen and Senator Mondale of Minnesota almost at once introduced identical Bills (HR 13,406 and S 3,138) which incorporated the NSMR views. The result was that the House Committee on Agriculture drastically altered the Poage Bill to a form in which it closely parallels the recommendations of the Riker Committee, except that it is still directed in a discriminatory fashion toward research facilities, in that it would make theft of cats and dogs illegal if for research purposes, but not otherwise. It passed the House of Representatives on April 28 by a vote of 352 to 10, and with the defeat of all attempts from the House floor to add amendments restrictive to sound research, a remarkable tribute to the vigor and wisdom of the efforts of NSMR. The Poage Bill is now HR 13,881, and not only is it essentially a good bill from the point of view of the public interest, but indicates that the scien-

tific community has earned the respect and support of several members of the Committee on Agriculture.

Simultaneously, *the same matter* came to hearings on March 25 and 28 before the Senate Committee on Commerce, chaired by Senator Magnuson of Washington, whose bill, S 2,322, occasioned said hearings. The first morning of hearings was accompanied by Klieg lights and television cameras during abusive outbursts by the antivivisectionists, and in a full morning of such testimony, only one speaker for the scientific community, Maurice Visscher, was heard for about 20 minutes, during which he was critically interrogated by the Chairman; but quiet reason did change the complexion of things. In the week-end between the 2 days of hearings, scientific friends of Senator Magnuson were communicating with him on the merits of the problem from the viewpoint of the public interest. Senator Magnuson was absent from the March 28 session, but the hearings were now characterized by careful audition of the scientific point of view.

Because of additional amendments to the Magnuson Bill by Senator Monroney, Senator Magnuson held an additional, but limited hearing of the Commerce Committee May 25, which was limited to invited witnesses. Dr. John R. Hogness, Dean of the Medical School of the University of Washington, Dr. Albert B. Sabin, and Dr. James Shannon presented very effective arguments. It is hoped that the bill will be altered to concern the use of dogs and cats alone, to eliminate the $10,000 fine for infractions, to abolish the support of detailed supervision solely by fees—without government aid in so expensive an operation—which would be confiscatory to small dealers, to strip away the Monroney Amendments, which would bring the Department of Agriculture into a regulatory relationship with medical school laboratories, and to provide an unhindered flow of animals from both local pounds and dealers, without the risk of inadvertently receiving pets still wanted by their owners.

The hoped-for Administration Bill was long delayed, apparently because of refusal of the Bureau of the Budget to approve financial support for such laboratories as might need reconditioning to gain certification. The trying conditions of these hearings, with no strong favorable bill to support, led to the introduction of the nearly identical O'Brien (HR 14,328) and Javits (S 3,218) Bills from New York early in April. They had been approved in principle the same month by the American Society for Pharmacology and Experimental Therapeutics. The Administration Bill, prepared by the Department of Health, Education, and Welfare, was introduced as S 3,332 on May 10 by Senator Lister Hill for himself and Senators Allott, Holland, Robert and Edward Kennedy, McIntyre, Mondale, Wayne Morse, Nelson (Wis.), Neuberger, Pell, Randolph, and Yarborough, and referred to the Committee on Labor and Public Welfare, chaired by Senator Hill. This bill places responsibility for proper guidance and support of research laboratories upon the Surgeon General and the Secretary of HEW, as was desired by the NSMR. It is noteworthy that the authors of some previous antivivisectionist bills are among those who have now joined in promoting the Hill Bill.

It appears unlikely that there will be hearings on this bill before Senator Hill's Committee, for it has been bypassed by the Committee on Commerce in the first place, and hearings before Senator Hill are feared by him as likely to lead to restrictive amendments worse than the compromise anticipated between the Poage and Magnuson bills. This is believed to be the prevailing situation until such time as sound education of both voters and Congressmen can lead to a more enlightened general outlook.

Several Congressmen regard the antivivisectionist lobby as the most massive and powerful one in the last decade. The antivivisectionist group has not spent six years and a fortune with the intent of gaining anything less than severe restriction upon intelligent progress. They have already made known their frustration at the total absence

of restrictions upon research in the present bills by pleading with the NSMR to seek new hearings, which the NSMR has refused to do.

PRESENT STATUS OF LEGISLATION AND THE POTENTIAL OF THE CARDIOVASCULAR SURGEON

Our present status is precarious, even though sound progress has been made. Much has been learned, and we have advantages not possessed by the scientists of 1876, in spite of the wealth and widespread public press support of our opposition. Among these advantages are the gains in anesthesia and analgesia, which made such procedures as originally sparked the antivivisectionist movement unheard of today. In the second place, the benefits to mankind derived from animal research are now far more abundant for the open-minded to see. In the third place, we have a larger community of biological scientists who can communicate with our legislators and enlighten the public. In the fourth place, we have no domineering antivivisectionist monarch, and there is no one high in the Administration known to be opposed to the public interest in this regard. In the fifth place, we have a smoothly running National Society for Medical Research stationed in Washington to coordinate our efforts, with a superb strategist in charge. Finally, NSMR has become well schooled in the preparation of telling testimony.

If we may learn a lesson from 1876, Lister wrote that public clamor produced a bill which went far beyond the recommendations of the Royal Commission, to which many of the finest scientists of that time had offered testimony. This author has been unable to find evidence of any efforts to educate Members of Parliament at that time, and here the policy of the NSMR provides real strength which the British did not employ. One of our problems is that legislators are beset with unbelievable mountains of material to consider. They are not infrequently misled by frenetic pressure groups, and hearing plausible arguments, and being heavily pressed for time, are all but coerced to lend their names and prestige in an unfortunate fashion. Many of these men are highly intelligent and open-minded, and at least one Committee chairman has not only joined with us after having introduced restrictive bills under such pressures, but has since introduced a new bill in the public interest.*

These changes in viewpoint on the part of Congressmen are not accomplished by floods of mail alone or in great part, but by the patient and quiet presentation of objectively established facts, reasonable approaches to obvious problems, and the support of persons known and respected by the legislators. Former Congressman James D. Weaver, M.D.,[18] suggests careful mobilization of the facts, placing major stress on the *public interest,* and the forwarding of the same by mail to legislators who come from one's own district, or are directly concerned through committee membership. This action should be followed by a personal visit, by appointment, in groups no larger than six. Weaver suggests that other legislators should be reached through one's own representative or senator, not directly.

The NSMR has also made excellent use of Committee hearings. Anyone who can represent a society or school or research facility can be placed on the witness list for open hearings by a call to the Clerk of the Committee which is to hold the hearing.† Visscher has held caucuses of witnesses the nights before hearings, for coordination of testimony. Dispassionate presentation of facts has been highly effective. The antivivisec-

*Congressman O'Brien's new HR 14,328.

†Notice of forthcoming hearings is sometimes but a few days. This and coordination of efforts are best achieved through one's state Society for Medical Research or the NSMR, 1330 Massachusetts Ave., N.W., Washington, D. C. 20005, Phone Area Code 202-347-9565. If one cannot attend, his material can usually be inserted in the Record by a letter addressed to the Chairman of the Committee involved, if it is received within five days after the hearing. Copies of bills may be obtained by written inquiry to the United States Government Printing Office, Washington, D. C. The names of congressmen and of the chairmen of congressional committees can be found in the *World Almanac,* published by World Almanac, 230 Park Avenue, New York 10017, or the *Reader's Digest Almanac,* Reader's Digest Association, Pleasantville, New York. One can also write to his congressman for a *Congressional Directory.*

tionists, on the other hand, have been badly hurt by lurid tales of the use of stolen dogs in research laboratories which, as on March 28 before Senator Magnuson's Committee, they had no facts to support.

The main points which the NSMR had stressed are:

1. Forthright recognition of the importance of sound animal experimentation for the public interest.

2. Provision, by means of the American Association for Accreditation of Laboratory Animal Care, of organized voluntary accreditation of laboratories, with financial support for those in need of modernization.

3. Opposition to restrictive regulation of research activities.

4. Regulation of the supply of animals to assure a free flow from pounds or commercial dealers, with assurance against the possibility of receipt of stolen pets.

Most scientific societies to which we belong contribute each year to the NSMR, and too many among us have experienced the comfortable feeling that this alone should suffice, but there is need for greater participation. In the past two decades, cardiovascular surgery has made immense strides in this country. These advances, and many of those who made them, have captured the imagination of the reading public as the work of no other group in medicine has done. Nevertheless, one is disappointed upon review of the activities of the cardiovascular surgeons in America in defending their right to perform the very type of experimental work which makes their contributions possible. Some have fought and won local and state battles; among them are Blalock, Creech, W. W. L. Glenn, Lester Dragstedt, and Wangensteen and his associates. However, on the national scene, in this most precarious of all years, only one vascular surgeon (indeed only 2 surgeons at all—Walter Ballinger and Bernard Zimmerman) has lent his presence at the Congressional hearings which I have attended, or of which the Records have become available to me. There have been letters in some quantity, at least one included in a Record of hearings, but the past few months suggest that this is not the strongest avenue we have. The officers of the NSMR have demonstrated, as have those of the New York State Society for Medical Research, that it is essential and efficacious to find individuals in or out of our scientific community who are highly knowledgeable, and who know the requisite legislators personally. These men should speak with the Congressmen in a fully informed fashion. Many among our membership are so qualified and could be decisive. Further steps might include a massive planned program of talks before clubs, church groups, and school convocations, as W. W. L. Glenn and others of the Connecticut State Society for Medical Research did so successfully. Organization of laboratory inspection tours by Congressmen and state legislators could give many of them a firsthand understanding of what we have done, and can do. Well-organized news conferences for scientific writers could be crucial, as was the recent one at the University of Florida. Television discourses such as those of Visscher and Adrian Kantrowitz are also highly effective.

The surgeon joins the physician in affirmation of Osler's words, "In the life of every successful physician there comes the temptation to toy with the Delilah of the press—daily and otherwise. There are times when she may be courted with satisfaction, but beware! sooner or later she is sure to play the harlot, and has left many a man shorn of his strength, namely, the confidence of his professional brethren."[14] Vascular surgeons have commonly come into the public eye, not by their own design, it is hoped, but by the nature of their accomplishments. These are men who can play a key role in our present struggle, both by contacts with key legislators, and by graceful public education, and it is my humble hope that this talk may catalyze some support from vascular surgeons, such as has already been so superb from physiologists, veterinarians, cardiologists, and others.

Our case has been made precarious at points during this struggle by well-meaning persons or groups within the scientific com-

munity, possessed of incomplete understanding, who have urged masses of telegrams, letters, and phone calls to stress opinions at variance with those of the NSMR. No one wishes to be regimented, but the NSMR represents over 1,100 organizations, and reaches its official stands in a properly democratic way. United, biological scientists can stand, not fall, so that progress may flourish. Let us join forces with NSMR, both for the immediate battle, and for the sustained support that will be needed in the future.

It might appear short-sighted on my part to spend several months in preparation of an address concerning legislation which might already have transpired before presentation, and surely before publication. If again we look at the record since 1876, it is clear that within a very few years of passage of the British Act, pressures were already abuilding, and that in response to them a second Royal Commission was appointed, with the addition of further restrictions upon scientific progress.

That a more rapid and drastic course of events may be expected in the United States is already obvious, and a massive effort will certainly be made by the antivivisectionists in the 90th Congress. Even though many Congressmen have become disinclined to listen further to the antivivisectionists, vigorous education of both the public and the Congress is essential from this point onward.

CONCLUSIONS

1. The threat to continued progress in medical and biological research is urgent and great.

2. There are very real steps which we as academic cardiovascular surgeons are peculiarly well equipped to take in support of the excellently run program of the National Society for Medical Research.

3. This support is desperately needed now on a continuing basis, for the threat is increasing.

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